

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of:

Petition for Rulemaking of the Cellular
Telecommunications Industry Association
Concerning Implementation of WRC-2000:
Review of Spectrum and Regulatory
Requirements for IMT-2000

RM-9920

COMMENTS OF WORLDCOM, INC.

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SUMMARY

WorldCom, Inc. ("WorldCom") hereby submits its Comments on the Petition for Rulemaking filed by the Cellular Telecommunications Industry Association ("CTIA") in the above-captioned proceeding. CTIA requests that the Commission consider designating additional spectrum for third generation ("3G") wireless services, including the frequency bands that were identified at WRC-2000 for IMT-2000 services. WorldCom has a vital interest in this proceeding, having recently invested over \$1 billion for the rights to use spectrum in the 2.5 - 2.7 GHz ("MMDS/ITFS") band throughout the United States in order to provide advanced fixed wireless broadband services to unserved and underserved markets. Significantly, pursuant to the Commission's 1998 *Two-Way Report and Order* authorizing the use of the 2.5 - 2.7 GHz band for two-way digital communications, WorldCom recently filed applications for authority to provide such services in more than 60 markets.

In any proceeding examining 3G spectrum-related issues, the Commission must address more than just the limited issues raised by CTIA in its Petition. Moreover, the Commission should carefully examine the many assumptions made by CTIA before designating any additional spectrum for 3G services.

First, the Commission should examine the need for designating additional spectrum above and beyond the existing mobile services bands and/or other spectrum that the Commission has recently made available, or identified as available, for 3G services.

Second, the Commission must recognize that it has substantial flexibility in designating spectrum for 3G services. WRC-2000 concluded that individual administrations should have considerable flexibility in determining what (if any) new spectrum for 3G services should be made available in each country. While the 1710 - 1850 MHz and 2500 - 2690 MHz bands were identified as candidates for 3G services, it was simultaneously recognized that the

allocation of one, or both of these bands, would not necessarily be in the interests of all administrations. The Commission can and should examine a wide-range of frequency bands and make decisions on spectrum allocation based upon a careful analysis of the need, if any, for additional spectrum for 3G services in the U.S.

Third, the Commission must examine all of the frequency bands designated for IMT-2000 services, including spectrum already being used for existing mobile services, such as the cellular and PCS bands. As part of the Commission's public interest analysis, it must determine whether existing 1G and 2G spectrum is being used efficiently and could be used for 3G services before designating any additional spectrum for 3G. In this regard, the Commission should explore and evaluate possible migration/evolution paths for using existing cellular and PCS spectrum for 3G services.

Fourth, the Commission must examine whether it is essential for the United States to harmonize any additional spectrum it may designate for 3G services with the IMT-2000 bands identified at WARC-92 and WRC-2000. CTIA assumes that global harmonization of spectrum is a critical factor in the ability of the United States and its consumers to enjoy all of the benefits of 3G services. This assumption, however, may not be valid for several reasons. As an initial matter, global harmonization is not a requirement from the results of WRC-2000. Rather, WRC-2000 recognized that each administration should have flexibility in designating its spectrum for 3G services. Further, harmonization is also highly unlikely throughout the world because of the existing usage of the bands contemplated for 3G services. Accordingly, the Commission's analysis should include an examination as to whether other countries and regions are in fact making an effort to harmonize 3G spectrum globally.

As part of its inquiry into harmonization, the Commission must: (1) evaluate the extent to which global harmonization is actually driving the 3G market; (2) consider the

technical alternatives to frequency harmonization; and (3) question the perception that there is a significant market for worldwide roaming that requires the global harmonization of 3G spectrum.

The existing MMDS/ITFS uses of the bands are extensive and the investment by incumbent licensees has been (and continues to be) significant (i.e., billions of dollars). Incumbent licensees are now beginning to deploy advanced fixed wireless broadband services. WorldCom and others have made it abundantly clear that they will use this spectrum for advanced fixed wireless services that will not only compete with other broadband services but also provide millions of Americans with the first high-speed “pipe” into their homes and businesses. The Commission must avoid taking any action that would disrupt or displace incumbent MMDS/ITFS licensees who are deploying advanced fixed wireless broadband services to millions of unserved and underserved American consumers.

Since any proceeding conducted by the Commission in response to CTIA's Petition will require numerous studies and analysis, the Commission should institute a Notice of Inquiry ("NOI"), rather than a Notice of Proposed Rulemaking ("NPRM"). After conducting an NOI, the Commission is likely to be in a much better position to make specific proposals in any NPRM.

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COMMENTS OF WORLDCOM, INC.

Pursuant to Section 1.405 of the Commission's Rules,¹ WorldCom, Inc.

("WorldCom") hereby submits its Comments on the Petition for Rulemaking filed by the Cellular Telecommunications Industry Association ("CTIA") in the above-captioned proceeding.² CTIA requests that the Commission consider designating additional spectrum for third generation ("3G") wireless services, including some of the frequency bands that were identified at WRC-2000 for IMT-2000 services.

WorldCom has a vital interest in this proceeding, having recently invested over \$1 billion for the rights to use spectrum in the 2.5 - 2.7 GHz band throughout the United States in

¹ 47 C.F.R. § 1.405 (1999).

² *Petition for Rule Making of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000*, Petition for Rulemaking, filed July 12, 2000 ("Petition"). These Comments are being timely filed in accordance with *Comment Invited on Third Generation Wireless/IMT-2000 Petitions*, Public Notice, DA 00-1673 (rel. July 28, 2000). In response to this same Public Notice, WorldCom is filing today an Opposition to a Petition for Rulemaking filed by the Satellite Industry Association ("SIA"). See *Amendment of the U.S. Tables of Frequency Allocations to Designate the 2500 - 2520 and 2670 - 2690 MHz Frequency Bands for the Mobile-Satellite Service*, Petition for Rulemaking, filed April 28, 2000, RM-9911.

order to provide advanced fixed wireless broadband services to unserved and underserved markets. WorldCom's access to this spectrum emanates from its role as a licensee for Multichannel Multipoint Distribution Service ("MMDS") and/or a lessee of channels from Instructional Television Fixed Service ("ITFS") licensees in more than 160 markets in the United States. Significantly, pursuant to the Commission's 1998 *Two-Way Report and Order* authorizing the use of the 2.5 - 2.7 GHz band for two-way digital communications, WorldCom recently filed applications for authority to provide such services in more than 60 markets.³

In any proceeding examining 3G spectrum-related issues, the Commission must address more than just the limited issues raised by CTIA in its Petition. The Commission should carefully examine the many assumptions made by CTIA and expand its inquiry, at a minimum, to include: (1) an examination into the need for additional 3G spectrum in the United States beyond the current spectrum already allocated or available for mobile services; (2) a recognition that the Commission has substantial flexibility in designating spectrum for 3G services; (3) a determination as to whether the spectrum used for existing mobile services can be used for 3G services; and (4) an examination of whether global harmonization is necessary in order for 3G services to be successful in the United States. As an MMDS licensee with a substantial economic stake in the 2.5 - 2.7 GHz band, WorldCom submits that any reallocation of this band for 3G services would jeopardize its deployment of advanced broadband service offerings and eliminate the public interest benefits to be derived from such two-way services.

³ See *In the Matter of Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd. 19112 (1998) ("*Two-Way Report and Order*"). Prior to the *Two-Way Report and Order*, the MMDS spectrum had been used primarily for the delivery of one-way video programming (so-called "wireless cable"). See "WorldCom Files Broadband Fixed Wireless Bids for 60-Plus Markets," TR Daily (Aug. 14, 2000).

I. THE SCOPE OF ANY COMMISSION PROCEEDING CONSIDERING 3G SERVICES MUST GO BEYOND THE LIMITED ISSUES RAISED IN, AND ASSUMPTIONS MADE BY, THE PETITION

CTIA requests that the Commission initiate a proceeding to examine "the implications of, and impediments to" designating additional spectrum for 3G in the 1710 - 1885 MHz and 2500 - 2690 MHz bands – i.e., two of the bands identified at WRC-2000 for possible future use by IMT-2000 services.⁴ CTIA requests that the Commission do so in a manner that results in a "harmonized designation of spectrum for the development of advanced mobile services" so that the U.S. economy and consumers fully benefit from 3G services and technologies.⁵ CTIA further urges the Commission to conduct comprehensive studies of the 1.7 and 2.5 GHz bands to determine the suitability of each of these bands for the provision of 3G services.⁶

In any proceeding examining 3G spectrum-related issues, the Commission must address more than just the limited issues raised by CTIA in its Petition. Moreover, the Commission should carefully examine the many assumptions made by CTIA before designating any additional spectrum for 3G services. Some of these threshold issues and questions are outlined below.

A. The Commission Should Examine the Need for Additional 3G Spectrum

As a threshold matter, the Commission must first examine whether there is a real need in the United States for additional mobile services spectrum -- above and beyond existing

⁴ Petition at 6.

⁵ Petition at 11.

⁶ *Id.*

mobile services spectrum and/or other spectrum that the Commission has recently made available, or identified as available, for mobile services -- in order to meet the anticipated demand for 3G services. While CTIA has stated that the success of "1G" and "2G" systems "foreshadows the potential" for 3G systems,⁷ the Commission must fully examine what this potential is and the amount of spectrum that is required to satisfy it. This is especially the case if the designation of additional spectrum for 3G services were to disrupt or dislocate existing services.

While WorldCom is aware that various forecasts were introduced prior to WRC-2000 on the potential demand for 3G services worldwide, a consensus was not reached at WRC-2000 on the amount of additional 3G spectrum needed at this time. Indeed, Resolution [COM5/24] provides that "flexibility must be afforded to administrations to determine, at a national level, how much spectrum to make available for IMT-2000 from within the identified bands. . . ."⁸ and that "due to differing requirements, not all administrations may need all of the IMT-2000 bands identified at this conference, or, due to the usage by and investment in existing services, may not be able to implement IMT-2000 in all of those bands."⁹

Accordingly, the Commission should not designate any additional 3G spectrum until it has conducted a comprehensive investigation of the potential 3G market in the United States. In doing so, the Commission must, among other things, analyze the substantial

⁷ *Id.* at 2.

⁸ Resolution [COM5/24].

⁹ *Id.* ("the identification of several bands for IMT-2000 allows administrations to choose the best band or parts of bands for their circumstances"). *Id.*

differences between the telecommunications markets in the U.S., Europe, and Asia, and the impact of these differences on the potential demand for 3G services and spectrum.

B. The Commission Must Recognize That It Has Substantial Flexibility in Designating Spectrum for 3G Services

The Commission must recognize that in designating additional bands for 3G services, WRC-2000 concluded that individual administrations should have considerable flexibility in determining what (if any) new spectrum for 3G services should be made available in each country. Rather than limiting an administration to designating spectrum from the 1710 - 1850 MHz and 2500 - 2690 MHz bands, Resolution [COM5/24] requested that more studies be conducted to address, among other things, the “means to facilitate global roaming across *different regional band[s]*. . . .”¹⁰ While the 1710 - 1850 MHz and 2500 - 2690 MHz bands were identified as candidates for 3G services, it was simultaneously recognized that the designation of these bands would not necessarily be in the interests of all administrations. Accordingly, in responding to the Petition, the Commission is not constrained to looking only at the bands identified by CTIA. Rather, it can and should examine a wide-range of frequency bands and make decisions on spectrum usage based upon the demonstrated need for 3G services in the U.S. and the impact on incumbent licensees in those bands.

C. The Commission Must Consider The Spectrum Used For Existing Mobile Services

As part of the Commission's broad inquiry in response to CTIA's Petition, it must examine all of the frequency bands designated for IMT-2000 services, including spectrum

¹⁰ See Annex 1 to Resolution [COM5/24].

already being used for existing mobile services, such as the cellular and PCS bands.¹¹

Resolution [COM5/24] clearly notes that all of this spectrum could be used for 3G services.¹² As part of the Commission's public interest analysis, it must determine whether existing 1G and 2G spectrum is being used efficiently and could be used for 3G services before designating any additional 3G spectrum. In this regard, the Commission should explore and evaluate possible migration/evolution paths for converting existing cellular and PCS spectrum to 3G services – an alternative expressly contemplated in the WRC-2000 Resolutions.¹³ Indeed, the gradual migration or evolution of existing IMT-2000 spectrum to 3G services would be the least disruptive since it would not abruptly dislocate incumbent users in other bands. For example, the Commission should examine whether analog cellular bands could be more efficiently used for digital 3G services in the future.

Besides the migration/evolution of 1G and 2G frequency bands, the Commission has already identified significant additional spectrum that can be used for 3G services. As noted in the Commission's Spectrum Policy Statement, the 1710 - 1755 MHz, 2110 - 2150 MHz and 2160 - 2165 MHz bands could be paired for use by 3G services.¹⁴ Moreover, a portion of the PCS bands could be combined with the 1.7 and/or 2.1 GHz bands for the provision of 3G

¹¹ There are a wide range of spectrum bands available for IMT-2000, including the 806 - 902 MHz, 928 - 960 MHz, 1710 - 2025 MHz, 2110 - 2200 MHz and 2500 - 2690 MHz frequency bands.

¹² See Resolution [COM5/24] ("the identification of several bands for IMT-2000 allows administrations to choose the best band or parts of bands for their circumstances").

¹³ *Id.* ("currently operating second-generation mobile communication systems may evolve to IMT-2000 in their existing bands").

¹⁴ *In the Matter of Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium*, 14 FCC Rcd. 19868, 19878 (1999) ("Spectrum Policy Statement").

services, and/or TDD technologies could be offered in any “orphaned” 3G spectrum.¹⁵ In addition, 30 MHz (*i.e.*, 747 - 762 MHz and 777 - 792 MHz) within the 700 MHz band will soon be auctioned¹⁶ and the mobile service spectrum once licensed to NextWave will be reaucted (with some restrictions). Another alternative is to move incumbent government users out of the 1.7 GHz band and into the 2.1 GHz band in order to develop a paired allocation for 3G services at 1.7 - 1.8 GHz.¹⁷

In sum, there are a myriad of possibilities for utilizing existing mobile service allocations and/or other spectrum allocations without displacing incumbent users of spectrum. All of these alternatives should be considered by the Commission prior to making any additional 3G spectrum designations.

D. Complete Harmonization May Not Be Necessary for Implementing 3G Services in the U.S.

As part of its inquiry, the Commission also must examine whether it is essential for the United States to harmonize any additional spectrum it may designate for 3G services with all of the IMT-2000 bands identified at WARC-92 and WRC-2000. In its Petition, CTIA simply

¹⁵ See *Service Rules for the 746 - 764 and 776 - 794 MHz Bands, and Revisions to Part 27 of the Commission's Rules*, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, FCC 00-224 at ¶ 6 n.9 (rel. June 30, 2000).

¹⁶ See *id.* at ¶ 4. The 700 MHz auction was recently postponed until March 6, 2001, in "order to provide additional time for bidder preparation and planning." *Auction of Licenses for the 747 – 762 and 777 – 792 MHz Bands Postponed Until March 6, 2001*, Public Notice, FCC 00-282 (rel. July 31, 2000).

¹⁷ See "Military Frequencies Considered for Wireless Phone Industry," *LA Times* (Aug. 16, 2000) ("Concerned that the United States is falling behind some other nations in the race to offer advanced wireless phones with high speed internet access, the Clinton administration wants to let the phone industry use airwaves reserved for Air Force communications, intelligence gathering and the global positioning satellite navigational system.").

assumes that global harmonization of spectrum is a critical factor in the ability of the United States and its consumers to enjoy all of the benefits of 3G services.¹⁸ There is reason to believe, however, that this assumption may not be valid.

First, as an initial matter, global harmonization is not a requirement from the results of WRC-2000. Rather, WRC-2000 clearly recognized that each administration should have flexibility in designating its spectrum. Resolution [COM5/24] states that "the identification of several bands for IMT-2000 allows administrations to choose the best band or parts of bands for their circumstances."¹⁹ Administrations are free therefore to designate 3G spectrum that may or may not be harmonized with designations in other parts of the world.

Second, as a practical matter, global harmonization is highly unlikely to happen because of the existing usage in different countries of the bands contemplated for 3G services. Indeed, Resolution [COM5/24] recognizes that there are already incumbent users of the 3G bands designated at WRC-2000: "services such as broadcasting-satellite, broadcasting-satellite (sound), mobile-satellite and fixed (including multipoint distribution/communication systems) are in operation or planned in the band 2500 - 2690 MHz, or in portions of that band."²⁰ Accordingly, "not all administrations may need all of the IMT-2000 bands identified at this conference, or, due to the usage by and investment in existing services, may not be able to implement IMT-2000 in all of those bands."²¹ Given the existing uses of the bands designated at

¹⁸ Petition at 2.

¹⁹ Resolution [COM5/24].

²⁰ *Id.*

²¹ *Id.*

WRC-2000, the Commission's analysis should include an examination as to whether other countries and regions are in fact making an effort to harmonize 3G spectrum globally.

According to CTIA, the Commission's failure to harmonize 3G spectrum would place the United States out of step "with the rest of the world."²² The Commission should not assume that this is the case, but rather, it must review the spectrum plans of other administrations with respect to designating 3G spectrum. Significantly, CITEL, representing Western Hemisphere countries, recommended to WRC-2000 the identification of the 1.7 GHz band for 3G services,²³ and most Western Hemisphere countries, including Canada, Mexico and most of Latin America are considering only the 1.7 GHz band for 3G services. More dramatic differences in the allocation of spectrum for 3G are expected in China and many Asian countries. If other administrations are not seeking to harmonize 3G spectrum, the Commission should question whether harmonization should be a basis for U.S. spectrum allocations, especially if harmonization comes at the expense of dislocating incumbent users of spectrum.

Third, the Commission must evaluate the extent to which global harmonization is actually driving the 3G market. In Europe, operators have been willing to pay significant sums of money for 3G spectrum without any assurance of global harmonization (*e.g.*, U.K. and Germany).²⁴ Accordingly, there are strong marketplace indications that a lack of global harmonization will not stifle the 3G market.

²² Petition at 2.

²³ CITEL Administrations Proposals for the Work of the Conference, Agenda Item 1.6.1, Document 14-E, World Radiocommunication Conference, Istanbul, May 8 - June 2, 2000.

²⁴ See "GERMAN 3G SPECTRUM AUCTION TOPS U.K. BIDDING TOTAL BY \$10 BILLION," TR Daily (August 17, 2000) ("The German government has raised a whopping 98.8 billion deutschemarks (\$46.2 billion) from its third-generation (3G) wireless spectrum auction...")

Fourth, the Commission should consider the technical alternatives to frequency harmonization. For example, complete harmonization may not be needed worldwide because equipment manufacturers are able to build mobile handsets economically to operate on multiple frequency bands. Motorola's small and lightweight tri-band 2G mobile phones have been available for some time and can operate in all regions of the world.²⁵ A far greater impediment to economies of scale and interoperability of systems appears to be multiple standards. Thus, at the same time the Commission is studying frequency harmonization, it should also examine whether the mobile services industry is pursuing measures to create uniform and/or compatible modulation standards for 3G services in order to create better efficiencies and economies for manufacturers of mobile equipment. Significantly, it appears that it is more expensive to make a dual mode handset than a multi-band handset. An examination of how best to harmonize modulation standards may reveal that harmonizing frequency bands for 3G services is simply not necessary.

Fifth, the Commission must consider the extent to which support for harmonization is derived from the perception that there is a significant market for worldwide roaming that requires the global harmonization of 3G spectrum. The Commission should not assume that a significant global roaming market exists or will develop in the near future. Rather, the Commission must examine the size, scope and elasticity of the market for global roaming. If anything, there are indications that the global mobile roaming market is relatively small. Indeed,

(...continued)

²⁵ It should be noted that in Europe and elsewhere, 3G operators will need to provide multi-band, multi-mode handsets for many years until the roll-out of 3G is complete, so that customers will be able to obtain service in areas not yet served by 3G systems.

the recent struggles that have plagued Mobile Satellite Service ("MSS") operators indicate that projections of a large global roaming market may be overblown.

**II. ANY NEW 3G SERVICE ALLOCATIONS MUST NOT JEOPARDIZE
ADVANCED TWO-WAY BROADBAND SERVICES OFFERED BY MMDS/ITFS
LICENSEES**

CTIA correctly identified in its Petition some of the challenges associated with reallocating the 2.5 - 2.7 GHz band for 3G services.²⁶ As an MMDS licensee with a substantial economic stake in this band, WorldCom is concerned that any reallocation of the 2.5 - 2.7 GHz band for 3G services would jeopardize its advanced broadband service offerings and eliminate the public interest benefits to be derived from such two-way services.

**A. There Are Significant Public Interest Benefits to Maintaining Two-Way
Advanced Broadband Services In the MMDS/ITFS Bands**

The existing MMDS/ITFS uses of the bands are extensive and the investment by incumbent licensees has been (and continues to be) significant (i.e., billions of dollars). Most notably, pursuant to the Commission's 1998 Two-Way Report and Order authorizing the use of MMDS/ITFS spectrum for two-way digital communications, incumbent licensees are beginning to deploy advanced fixed wireless broadband services.²⁷ Deployment of those services will accelerate rapidly when the Commission begins granting two-way MMDS applications in the next few months.

WorldCom and others have made it abundantly clear that they will use this spectrum for advanced fixed wireless services that will not only compete with other broadband

²⁶ Petition at 10.

²⁷ See *In the Matter of Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 13 FCC Rcd. 19112 (1998) ("*Two-Way Report and Order*").

services but also provide millions of Americans with the first high-speed “pipe” into their homes and businesses. These services are ideal for reaching people in rural and other markets unserved or underserved by DSL and cable modem services, thereby helping to narrow the “digital divide” and satisfying the Congressional mandate to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans.”²⁸

In its *Two-Way Report and Order*, the Commission identified the 2.5 - 2.7 GHz band as ideally suited for two-way services, including high-speed Internet data applications,²⁹ and amended its Rules “to enhance the ability of MMDS and ITFS licensees to provide two-way service [to] benefit commercial operators, educational institutions and the public.”³⁰ As the Commission recognized at the time:

The rules we adopt today will also provide significant benefits to consumers. A new, competitive group of players will now enter the market for high speed two-way communications service. Both individual and business consumers will be able to use the high-speed and high-capacity data transmission and Internet service that will be available through the new systems. Also, consumers will be able to take advantage of new video-conferencing, distance learning and continuing education opportunities Most importantly from a consumer perspective, there will be another choice of provider for these services, helping to drive down the costs in a more competitive market.³¹

²⁸ 47 U.S.C. § 157.

²⁹ See *Two-Way Report and Order*, 13 FCC Rcd. at 19117. This spectrum is primarily being used today for the provision of either one-way distance learning service to students or wireless cable service to subscribers. *Id.* It has been estimated that there are approximately one million homes currently being served with multichannel video programming service from MMDS/ITFS wireless cable systems. See *Wireless Cable-Private Cable Investor*, at 6 (Nov. 5, 1999). In addition, there are over 70,000 registered receive site locations in the United States being served with programming by approximately 1,275 ITFS licensees. See *The Case for Preserving the 2.5 GHz Band for MMDS and ITFS: A Joint Report of the WCA and the NIA*, at 5 (April 2000).

³⁰ *Two-Way Report and Order*, at ¶ 6.

³¹ *Id.* at ¶ 9.

The public benefits envisioned by the Commission are now coming to pass, and will accelerate rapidly in the next 12 months. In 1999, WorldCom alone invested over \$1 billion to obtain access to MMDS/ITFS spectrum in over 160 markets – more than half of which are in non-major metropolitan areas. WorldCom now has the ability to serve more than 31 million households across the United States (approximately 30% of all U.S. households). When the Commission opened its first two-way filing window, WorldCom filed applications to provide two-way service in more than 60 markets – many of which are second and third tier markets in terms of population.³²

In anticipation of its wide-scale deployment of fixed wireless broadband services, WorldCom has commenced trials of first-generation MMDS technology in Jackson, MS; Baton Rouge, LA; and Memphis, TN. In Dallas and Boston, WorldCom is working with major equipment vendors (including Cisco, Motorola and ADC Telecommunications) to test second-generation MMDS technologies. WorldCom is on track to roll out commercial service in Memphis in the fourth quarter of this year.

Other MMDS operators are moving forward rapidly too. Sprint Corporation has also invested over \$1 billion in MMDS assets in 1999, and has already rolled out commercial fixed wireless broadband service in Phoenix and Tucson.³³ In the recent filing window, Sprint

³² See "WorldCom Seeks Broadband Fixed Wireless Authority," WorldCom Press Release (Aug. 14, 2000) ("WorldCom, Inc. . . . is filing its first round of applications for licensing authority to offer broadband fixed wireless services in more than 60 markets nationwide including major cities such as Boston, Providence, Pittsburgh and San Antonio and smaller cities including Jackson, MS, Memphis, Buffalo and Norfolk, VA.").

³³ See *Kagan Broadband*, at 1 (March 8, 2000); Smith, "Laying the New Broadband Foundation," *Wireless Week*, at 24 (Feb. 28, 2000); "Nucentrix To Offer Wireless To Dell Customers," *Wireless Cable Investor*, at 4 (Mar. 9, 2000); Bonisteel, "Sprint Launches First Broadband Wireless Service," *Newsbytes* (May 8, 2000) ("Sprint Corp. today announced the first commercial launch of its broadband wireless service, offering residential and business customers (continued...)").

filed applications to provide two-way service in 45 markets. In addition, Nucentrix Broadband Networks, Inc., the third largest MMDS operator, filed application for 70 markets in Texas and the midwest.³⁴ Indeed, the Commission has recently recognized that “many wireless cable companies have begun to focus on offering high-speed Internet Access and telephony instead of television programming, and have shown early success in these endeavors.”³⁵

On the eve of delivering these benefits to consumers, the Commission should not do anything to jeopardize the success of MMDS/ITFS two-way services, such as allocating new services that could interfere with or displace incumbent usage.

(...continued)

in Phoenix, Ariz., multi-megabit Internet access at rates comparable to its high speed dial-up and cable modem competition."); "MMDS Industry Gears Up on Standards Issues, Spectrum Planning," *Communications Daily* (April 3, 2000) ("Broad array of MMDS license holders and equipment manufacturers is working on standard-setting issues for gear that will be deployed on much wider scale later this year by companies such as MCI WorldCom. . .and Sprint."); "MCI, Sprint Reveal Pact to Pave MMDS Deployment," *Communications Today* (July 11, 2000) ("The merger failure, however, didn't pull the rug from under the two long distance giants' MMDS plans. By including other carriers in their guidelines for deploying MMDS systems, they'll have more compatible networks as neighbors, and more reasons for customers to buy their services.")

³⁴ See "Sprint Outlines First 2-Way FCC MMDS Filings," *Communications Daily* (Aug. 22, 2000) ("Sprint said its first round of 45 applications include Bloomington, Ind., Chicago, Denver, Las Vegas, Milwaukee, Nashville, Phoenix, San Francisco, St. Louis, Seattle, Tucson. Sprint said the markets for which it has filed for 2-way service would give it access to 24.8 million of the 30 million households covered by its MMDS licenses."); Nucentrix Company Press Release (Aug. 21, 2000) ("Nucentrix. . .today announced that it has filed applications with the Federal Communications Commission (FCC) for authorization to use its spectrum to provide broadband fixed-wireless services in 70 markets across Texas and the midwestern United States. . . .Nucentrix recently announced the successful completion of an initial technology trial with Cisco Systems in Austin, Texas. . . .Following regulatory authorization for its applications, Nucentrix plans to launch fixed-wireless broadband services in at least 20 markets by the end of 2001.").

³⁵ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, 14 FCC Rcd 10145, 10259-60, 10271-72 (1999); *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, 14 FCC Rcd 2398, 2428 (1999).

B. 3G Services Are Incompatible with Existing and Planned Usage of MMDS/ITFS Bands

Introduction of 3G services into the 2500 - 2690 MHz bands will disrupt existing and proposed MMDS/ITFS operations, thereby jeopardizing the significant investment by numerous carriers and affecting the ability of consumers to derive the substantial public interest benefits discussed above. Preliminary studies by WorldCom indicate that sharing between ubiquitous terrestrial mobile and terrestrial fixed services simply will not work. The Commission must examine this mutual interference scenario as part of any proceeding in response to the CTIA Petition.

III. AT THIS EARLY STAGE A NOTICE OF INQUIRY IS MORE APPROPRIATE THAN A RULEMAKING PROCEEDING

As set forth above, any proceeding conducted by the Commission in response to the Petition will require numerous studies and analyses before specific proposals can be made. Many questions need to be answered, and undoubtedly, many others will be raised as a result of a closer examination of the issues. Accordingly, the Commission should institute a Notice of Inquiry ("NOI"), rather than a Notice of Proposed Rulemaking ("NPRM"), in response to the Petition. Given the extent of the studies required and the complicated questions to be analyzed, it is premature for the Commission to propose rules or any specific spectrum allocations in response to the CTIA Petition.

Indeed, rather than calling for specific rules or allocations, CTIA's Petition highlights the need for studies to be conducted both by government and industry before making any new allocations for IMT-2000 services. For example, CTIA asks the Commission to initiate a proceeding to "*examine the implications* of, and impediments to, implementation of [the

WARC-92 bands and the 1710 - 1885 MHz and 2500 - 2690 MHz] bands in the United States."³⁶

According to CTIA, "[m]any factors support the urgent need for an *inquiry* into" the use of these bands, including the results of WRC-2000.³⁷ To initiate an NPRM in response to this request may not only be premature, but the Commission may risk proposing rules and policies that lack the requisite specificity required under the Administrative Procedure Act ("APA"). An NOI therefore appears to be a more appropriate vehicle for creating a record for any future FCC action.

IV. CONCLUSION

In sum, in any proceeding initiated in response to the CTIA Petition, the Commission must ensure that the scope of its inquiry is broad enough to include, at a minimum, the issues set forth above. While CTIA acknowledges that studies and analysis need to be conducted by the Commission before any additional 3G spectrum designation is made, the Commission must also consider whether such a designation is even needed, as well as the full-range of spectrum bands that the Commission has already allocated for mobile services. WRC-2000 provides each administration with substantial flexibility in designating 3G spectrum and the Commission should not feel constrained by the concept of global harmonization when making any 3G spectrum designations.

The Commission must avoid taking any action that would displace or disrupt incumbent MMDS/ITFS licensees, like WorldCom, that have invested, and continue to invest,

³⁶ Petition at 6.


³⁷ *Id.* (emphasis added). See also *id.* at 7 ("Studies must be performed now to ensure that these auctions proceed in a manner that is harmonious and consistent with global use of this band while still meeting the Congressional timetables.").

billions of dollars to deploy advanced fixed wireless broadband services to millions of unserved and underserved American consumers.

Respectfully submitted,

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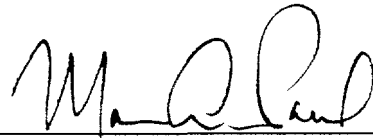
Counsel for WorldCom, Inc.

Dated: August 28, 2000

CERTIFICATE OF SERVICE

I hereby certify that on this 28th day of August, 2000 a true and correct copy of the foregoing Comments of WorldCom, Inc. was sent via first class mail, postage prepaid (or by hand delivery indicated by a *), to the following:

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A handwritten signature in black ink, appearing to read 'M. A. Paul', written over a horizontal line.

Marc A. Paul